

CAD (3161903) MID SEM (CO3) 2020-21 PART 1

The exam is as per Course Outcome for ease to map cos; total mark will be converted to the mid Sem component as per GTU syllabus

(1) ATTEMPT ALL QUESTIONS (2) QUESTION 1,2 COMPULSORY AND QUESTION 3 AND 4 (BOTH) IS IN OPTION WITH QUESTION 5 (3) FOR MARKING BEST MARK WILL BE CONSIDERED FOR OPTIONAL QUESTION

* Required

* This form will record your name, please fill your name.

1. homogeneous coordinates and matrix representation is useful *

(1 Point)

- To treat all transformations in a consistent way
- To scale
- To rotate
- To shear the object

2. _____ is a rigid body transformation that moves objects without deformation *

(1 Point)

- Rotation
- Scaling
- Translation
- All of the mentioned

3. Find new coordinates for triangle ABC with A (4, 4), B (8, 4) and C (6, 8). when transformation Rotation by 30° in CCW direction. *
(3.5 Points)

- A'(1.46,5.46),B'(4.93,7.46),C'(1.20,9.92)
- A'(3.46,1.46),B'(5.93,7.46),C'(1.20,9.92)
- A'(1.46,1.46),B'(4.93,2.46),C'(1.20,10.92)
- A'(3.46,4.46),B'(5.93,7.46),C'(0.20,9.92)

4. Find new coordinates for triangle ABC with A (4, 4), B (8, 4) and C (6, 8). when it is translated by 4 and 5 units along X and Y axis. *
(3.5 Points)

- A'(8,9),B'(11,8),C'(11,14)
- A'(8,9),B'(12,9),C'(10,13)
- A'(4,4),B'(8,4),C'(6,8)
- A'(8,9),B'(13,9),C'(13,13)

5. A polygon ABCD has vertices A(1,1), B(2,1), C(2,3) D(1,3). it has to be rotated by 30 degree counterclockwise about a point P(3,2) . new co ordinates of transformed rectangle *
(7 Points)

- A'(0.77,0.13),B'(0.63,0.63),C'(1.63,2.37),D'(0.77,1.87)
- A'(1.77,0.13),B'(2.63,0.63),C'(1.63,2.37),D'(0.77,1.87)
- A'(1.00,1.13),B'(2.63,0.63),C'(1.63,2.37),D'(0.77,1.87)
- A'(1.77,0.13),B'(2.63,0),C'(1.63,2.37),D'(0.77,1.87)